

PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of a new traffic control signal at the intersection of MD 108 and Richards Valley Road/Brothers Partnership Court in Howard County, Maryland. MD 108 is considered to run in an east/west direction.

II. INTERSECTION OPERATION

The intersection is to operate in a NEMA six (6) phase, full-traffic-actuated mode. There will be an exclusive/permissive left turn phase for both the eastbound and westbound movements of MD 108. The MD 108 through movements will operate concurrently with a concurrent pedestrian movement across the north leg of the intersection. The Richards Valley Road/Brothers Partnership Court through movements will operate concurrently with an actuated pedestrian movement across the west leg of the intersection.

An eight phase, full-traffic-actuated, solid state digital controller with intersection monitor and harness, battery back-up, video detection equipment, telemetry interface equipment and (1) four-channel rack mounted time delay output loop detector amplifiers housed in a base mounted cabinet are to be installed at this location.

III. SPECIAL NOTES:

The Contractor shall notify Mr. Robert Snyder of SHA at 410-787-7635 to arrange for the phone drop installation.

The Contractor is to provide Mr. Snyder with the nearest street number, zip code, and telephone number.

APS function as follows:

For Richards Valley Road

- a. When pedestrian locates and presses pushbutton for an extended time, the pushbutton message will be "Wait to cross Richards Valley at Waterloo.
- b. When walk phase begins, the audible sound will be a rapid tick, which will last for the duration of the walk phase.

For MD 108 and Richard Valley Road

- a. When pedestrian locates and press pushbutton for an extended time, the pushbutton message will be "Wait to cross Waterloo at Richards Valley
- b. When walk phase begins, the audible sound will be a rapid tick which will last for the duration of the walk phase.

For MD 108 and Brother Partnership Court

- a. When pedestrian locates and press pushbutton for an extended time, the pushbutton message will be "Wait to cross Waterloo at Brothers Partnership
- b. When walk phase begins, the audible sound will be a rapid tick which will last for the duration of the walk phase

CONTACT LIST

The contact persons are as follows:

Mr. John Concannon  
Assistant District Engineer - Traffic  
301-624-8140

Ms. Andrea Abend  
District Utility Engineer  
301-624-8115

Mr. Raymond F. Johnson  
Assistant District Engineer - Maintenance  
301-624-8105

Mr. Richard L. Daff  
Chief, Traffic Operations Division  
410-787-7630

Mr. Edward Rodenhizer  
Chief, Signal Operations  
410-787-7652

The Power Company Representative is:  
Baltimore Gas & Electric Company  
7317 Parkway Drive South  
Hanover, Maryland 21075  
410-859-9070  
WMS # 0001834941

EQUIPMENT LIST

Equipment to be furnished and installed by the Contractor in accordance with the most recent MD-SHA standards. All equipment in this list shall have catalog cuts submitted for approval prior to installation.

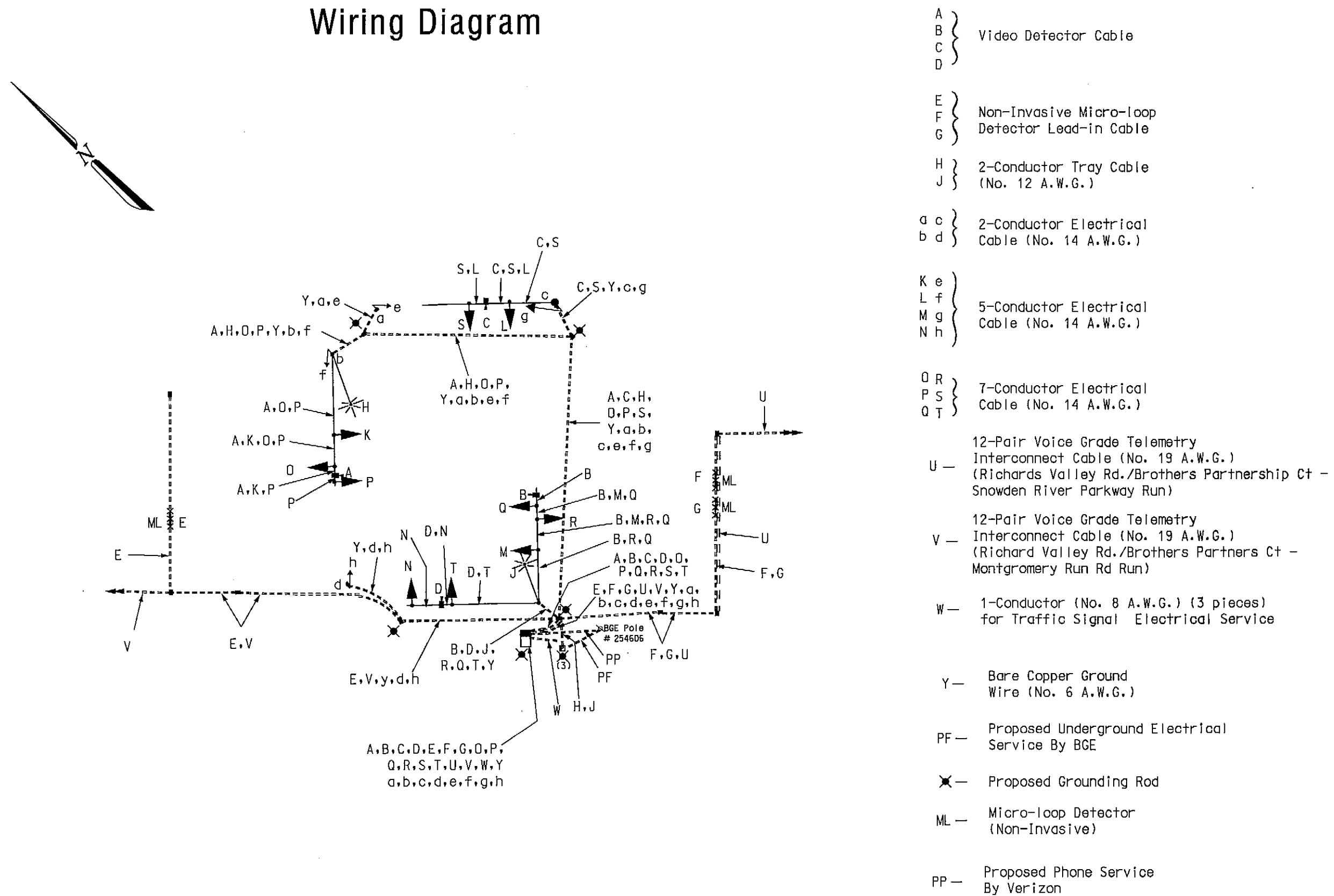
Quantity	Units	Description	Quantity	Units	Description
Lump Sum	LS	Mobilization.	Lump Sum	LS	Mobilization.
Lump Sum	LS	Maintenance of traffic.	Lump Sum	LS	Maintenance of traffic.
2	EA	27 ft steel mast arm pole with a 50 ft. mast arm.	5	CY	Test pit excavation.
1	EA	27 ft. steel twin mast arm pole with two 50 ft. mast arms	10	EA	Handhole.
2	EA	10 ft. steel pedestrian pole with break away transformer base.	75	LF	1-conductor electrical cable (No. 8 A.W.G.).
1	EA	Standard S.H.A. traffic signal controller, base mounted cabinet, video detection equipment, telemetry interface equipment, and one (1) four-channel loop detector amplifiers (Note: Controller and cabinet shall be purchased from Econolite and delivered to the S.H.A. signal shop for wiring and testing. Contact Mr. Ed Rodenhizer (410) 787-7650).	350	LF	2-conductor electrical tray cable (No. 12 A.W.G.).
6	EA	12 in., one-way, three section L.E.D. (R,Y,G) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.	725	LF	2-conductor electrical cable (No. 14 A.W.G.).
2	EA	12 in., one-way, five section L.E.D. (R,Y,YA,G,GA) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.	850	LF	5-conductor electrical cable (No. 14 A.W.G.).
2	EA	12 in./8 in. one-way, five section (12 in. YA,GA, 8 in. R,Y,G) adjustable black faced signal head with mast arm mounting hardware and tunnel visors.	2025	LF	7-conductor electrical cable (No. 14 A.W.G.).
1	EA	16 in. one-way, two section L.E.D. (countdown indication) adjustable pedestrian signal head with pole mounting hardware and cut-away visors.	375	LF	Bare copper stranded ground wire (No. 6 A.W.G.).
3	EA	16 in. one-way, two section L.E.D. (countdown indication) adjustable pedestrian signal head with post top mounting hardware and cut-away visors.	20	LF	2 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
4	EA	Terra Video Detection Camera	700	LF	3 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
675	LF	Terra Video Detection Cable (No. 18 A.W.G.).	210	LF	3 in. polyvinyl chloride (Schedule 80) electrical conduit - bored.
2	EA	16 in. x Var. D-3(1) (Dual Faced) sign with mast arm mounting hardware.	40	LF	4 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
2	EA	16 in. x Var D-3(1) sign with mast arm mounting hardware.	275	LF	4 in. polyvinyl chloride (Schedule 80) electrical conduit - bored.
2	EA	48 in. x 48 in. W 3-3 "NEW" sign for ground mounting.	13.5	CY	Concrete foundation for traffic signal equipment.
2	EA	48 in. x 75 in. shield assembly sign with pole mounting hardware.	8	EA	Ground rod - 3/4 in. diameter x 10 ft. length.
2	EA	30 in. x 51 in. shield assembly sign with pole mounting hardware.	1	EA	Electrical utility service equipment (120/240 V, one phase, three wire system) for an underground electrical power service as per MD-SHA Typical No. 807.05-01 - 100 amp. electrical pedestal.
1	EA	30 in. x 30 in. R3-5(R) sign with mast arm mounting hardware.	85	LF	4 in. x 6 in. wood sign support.
2	EA	48 in x 96 in D3-2(2) sign for ground mounting.	130	LF	24 in. Thermoplastic Pavement Marking - White for crosswalk.
1	EA	Central Control Unit for audible pedestrian pushbutton	400	LF	12 in. Thermoplastic Pavement Marking - White for stop line.
4	EA	Audible pedestrian pushbutton assembly with pushbutton sign ( 9 in. x 15 in. R10-3(1) ) sign.	2	EA	Remove existing ground mounting sign and post.
3	EA	Non-invasive probe (set of 3) with 1000 ft. lead-in cable.			
1	EA	15 ft. luminaire arm.			
1	EA	20 ft. luminaire arm.			
2	EA	250 W H.P.S. lamp and luminaire.			

\* SIGNS TO BE FABRICATED AND SENT TO DISTRICT # 7 FOR FUTURE USE TO REPLACE TEMPORARY W 3-3.

Phase Chart

	1	2	3	4	5	6	7	8	9	10	11,12	13,14
Phase 1 & 5	R	R	R	R	R	R	R	R	R	R	DW	DW
1 & 5 Change to Phase 1 & 6 or Phase 2 & 5 or Phase 2 & 6	G	G	G	G	G	G	G	G	G	G	DW	DW
Phase 1 & 6	G	G	G	R	R	R	R	R	R	R	DW	DW
1 Change	G	G	G	R	R	R	R	R	R	R	DW	DW
Phase 2 & 5	R	R	R	G	G	G	R	R	R	R	DW	DW
5 Change	R	R	R	G	G	G	R	R	R	R	DW	DW
Phase 2 & 6	G	G	G	G	G	G	R	R	R	R	WK	DW
Ped Clearance & Countdown	G	G	G	G	G	G	R	R	R	R	FL/DW	DW
2 & 6 Change	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW
Phase 4 & 8	R	R	R	R	R	R	G	G	G	G	DW	DW
4 & 8 Change	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW
Phase All 4 & 8	R	R	R	R	R	R	G	G	G	G	DW	WK
Ped Clearance & Countdown	R	R	R	R	R	R	G	G	G	G	DW	FL/DW
All 4 & 8 Change	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK

Wiring Diagram



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
MD 108 @ RICHARDS VALLEY ROAD/  
BROTHERS PARTNERSHIP CT

GENERAL INFORMATION PLAN

SCALE N/A DATE Dec 7, 2009 CONTRACT NO. BW996M82

DESIGNED BY J. DIRNDORFER COUNTY HOWARD  
DRAWN BY J. DIRNDORFER/FJH LOGMILE 13010813.70  
CHECKED BY CSW T.I.M.S. NO. 1-633  
F.A.P. NO. N/A TOD NO.

DRAWING NO. TS - G1-4681 SHEET NO. 2 OF 6

NOTE

These plans are approved for construction for a period of one (1) year from the date of approval. Should construction not begin within this time frame these plans shall be null and void without a re-review from the Traffic Engineering design Division.



The Traffic Group, Inc.  
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410-931-6600  
1-800-583-8411  
Fax 410-931-6601

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